

DEPARTMENT of ENVIRONMENTAL SERVICES  
Water Supply & Pollution Control Division - Biology Bureau

LAKE TROPHIC DATA

MORPHOMETRIC:

Lake: EZEKIEL POND	Lake Area (ha):	4.17
Town: DERRY	Maximum depth (m):	2.5
County: Rockingham	Mean depth (m):	1.0
River Basin: Merrimack	Volume (m <sup>3</sup> ):	43500
Latitude: 42°51'07" N	Relative depth:	1.1
Longitude: 71°16'53" W	Shore configuration:	1.29
Elevation (ft): 287	Areal water load (m/yr):	13.97
Shore length (m): 935	Flushing rate (yr <sup>-1</sup> ):	13.40
Watershed area (ha): 121.5	P retention coeff.:	0.51
% watershed ponded: 0.0	Lake type:	natural

BIOLOGICAL:

4 February 1998

27 August 1997

DOM. PHYTOPLANKTON (% TOTAL)	#1	DINOBRYON 97%	DINOBRYON 80%
	#2		CERATIUM 15%
	#3		
PHYTOPLANKTON ABUNDANCE (units/mL)			
CHLOROPHYLL-A (µg/L)			2.70
DOM. ZOOPLANKTON (% TOTAL)	#1	SPARSE - NO DOMINANT	PROTOZOAN SPP. 38%
	#2		CALANOID COPEPOD 29%
	#3		DIAPHANOSOMA 10%
ROTIFERS/LITER		9	12
MICROCRUSTACEA/LITER			235
ZOOPLANKTON ABUNDANCE (#/L)		37	404
VASCULAR PLANT ABUNDANCE			Common
SECCHI DISK TRANSPARENCY (m)			2.2 Visible on bottom
BOTTOM DISSOLVED OXYGEN (mg/L)		2.8	5.0
BACTERIA (E. coli, #/100 ml)	#1		8
	#2		
	#3		

SUMMER THERMAL STRATIFICATION:

not stratified

Depth of thermocline (m): None  
Hypolimnion volume (m<sup>3</sup>) : None  
Anoxic volume (m<sup>3</sup>) : None

**CHEMICAL:**

Lake: EZEKIEL POND

Town: DERRY

	4 February 1998		27 August 1997		
DEPTH (m)	1.0		1.5		
pH (units)	5.8		6.9		
A.N.C. (Alkalinity)	21.0		24.3		
NITRATE NITROGEN	0.17		< 0.05		
TOTAL KJELDAHL NITROGEN	0.50		0.60		
TOTAL PHOSPHORUS	0.022		0.012		
CONDUCTIVITY ( $\mu$ mhos/cm)	510.2		357.3		
APPARENT COLOR (cpu)	65		45		
MAGNESIUM			2.02		
CALCIUM			13.9		
SODIUM			50.2		
POTASSIUM			2.67		
CHLORIDE	152		102		
SULFATE	10		4		
TN : TP	30		50		
CALCITE SATURATION INDEX			1.9		

All results in mg/L unless indicated otherwise

**TROPHIC CLASSIFICATION: 1997**

D.O. S.D. PLANT CHL TOTAL CLASS

**	2	3	0	5	Meso.
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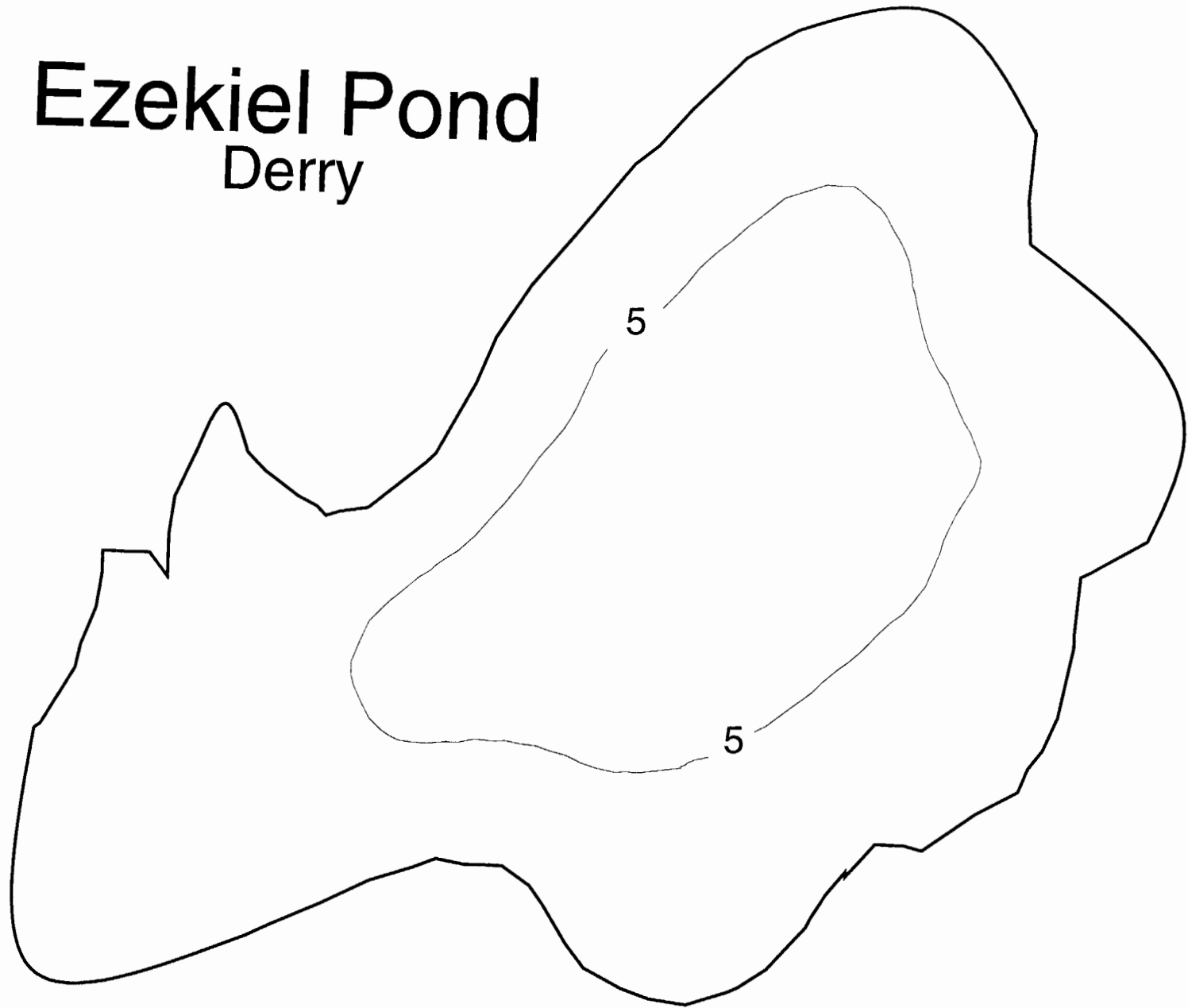
**COMMENTS:**

1. No boat launch. Pond was accessed by carrying a boat down an abandoned railroad bed, then along a narrow path to the water.
2. This is a small, shallow, tea-colored pond with elevated levels of conductivity, chloride and sodium ( and other cations), suggesting salted highway runoff ( Rt 28 passes through the watershed).

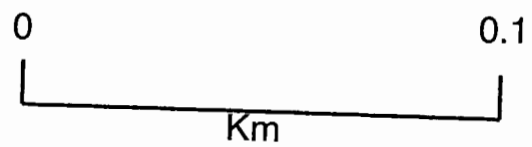
# Ezekiel Pond

Derry

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5 foot depth contours

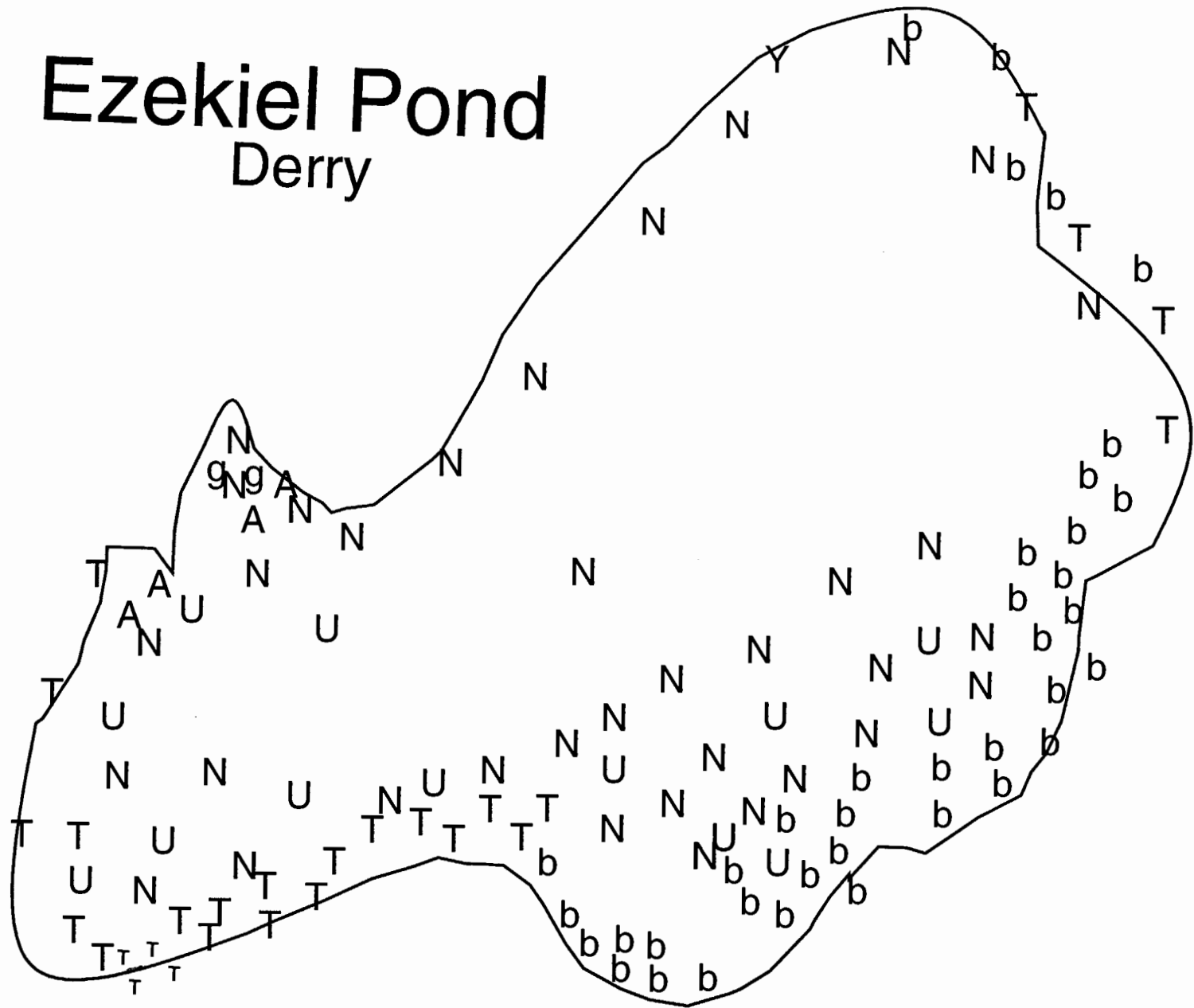
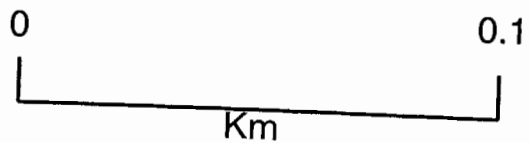


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# Ezekiel Pond

Derry

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